

Inventor(s): JAKOB *et al.*

Application No.: 09/961,395

Attorney Docket No.: 021123-0265258

II. REMARKS

Preliminary Remarks

Upon entry of this amendment, claims 1-5, 7-9 and 11-19 will be pending in this application. Claims 1 and 8 are independent. Claims 1 and 8 are amended to incorporate the subject matters of claims 6 and 10, respectively. The dependencies of claims 11, 14 and 15 are changed to reflect the cancellation of claims 6 and 10. The amendments to claims 11 and 14 (*i.e.*, inserting "of waterglass") and claim 12 (*i.e.*, inserting "of the magnesium compound") merely makes more explicit the antecedents of "amount" as it appears in the claims. The amendment to claim 13, (*i.e.*, inserting "chelate") merely makes more explicit the antecedent of the "complexing agent." The amendment to claim 4 merely makes explicit that the additive comprises a chelate complexing agent selected from the group set forth in the claim. Accordingly, the applicants believe that no new matter has been introduced as a result of these amendments.

This response is timely filed within the shortened statutory period for response. Therefore, the applicants believe that no fee is due.

The applicants respectfully request reconsideration and allowance of the present application.

Patentability Remarks

Rejection under 35 U.S.C. §112, first paragraph

Claims 1 and 8 are rejected as allegedly failing to comply with the written description in that the previously amended claims recite the limitation that additives and the sodium perborate product do not contain a condensed phosphate, whereas the specification and claims allegedly only support the limitation that the additives and the sodium perborate product do not contain the combination of a magnesium salt and a condensed phosphate.

Applicants respectfully disagree with the conclusion that the specification does not reasonably convey to one skilled in the relevant art that the inventors were not in possession of the invention as claimed.

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While it may be true that the specification as filed explicitly describes an embodiment which excludes the combination of a magnesium salt and a condensed phosphate, nevertheless it is also clear, and explicitly shown in the examples, *e.g.*, example nos. 10-18, wherein the chelate stabilizers are used in the absence of condensed phosphate, that Applicants also considered their invention to include the embodiment wherein the additive, whether a magnesium compound or one or more chelate complexing agents (or mixture thereof), does not contain a condensed phosphate.

Accordingly, reconsideration and withdrawal of this ground for rejection is respectfully requested.

Rejections under 35 U.S.C. §103(a) –

Claims 1-19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Bewersdorf *et al.* (U.S. Pat. No. 5,560,896) (hereafter Bewersdorf). The applicants respectfully traverse.

Bewersdorf does not disclose a process for making granular sodium percarbonate or a granular sodium percarbonate product which uses or includes "waterglass having an $\text{SiO}_2/\text{Na}_2\text{O}$ module of from 1 to 3 in an amount corresponding to 0.1 wt.% to 1 wt.% SiO_2 ."

All that is described by Bewersdorf is that "[p]otential additives which elevate the active oxygen stability are preferably magnesium salts ... and water glass" (Col. 7, lines 18-21).

From this disclosure it is apparent that there is no disclosure of using both magnesium salts and water glass and that there is no disclosure of the composition of the water glass or of its concentration. Additionally, because the disclosure presents magnesium salts and water glass as alternative, potential additives, the disclosure provides no motivation to combine magnesium salts and water glass together in an additive.

Moreover, there is no indication or suggestion that the amount and module of the water glass are important to achieve the objective of elevating oxygen stability. Therefore, even assuming *arguendo* that the practitioner would have been motivated to include both magnesium salts and water glass (despite being merely disclosed as alternative and "potential" stabilizers) the practitioner would still not have been apprised to optimize the $\text{SiO}_2/\text{Na}_2\text{O}$ module in the range of 1 to 3.

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With regard to the assertion that the resulting sodium percarbonate produced by the process of Bewersdorf would be expected to have identical properties to those claimed, as they are produced by the same process, Applicants respectfully disagree.

First, as indicated above, the processes, including the reactants, are not the same, therefore, there is no basis for assuming that the properties of the products would be the same.

Furthermore, there is no disclosure or suggestion that the sodium percarbonate granules produced by Bewersdorf would have a TAM value of equal to or less than 8 μ W/g measured after 48 hours at 40 °C.

As described in the present specification the properties of the dissolving time and stability in the TAM test are influenced by the amounts of magnesium compound and water glass that are used and the module of the water glass. None of these parameters are indicated as important or result effective in the disclosure of Bewersdorf.

Accordingly, there is no factual or evidentiary basis for concluding that the products of Bewersdorf have the same properties as that of the granular sodium percarbonate as set forth in the rejected claims.

Therefore, it is respectfully submitted that the subject matters of claims 1-19, as applied to the amended claims 1-5, 7-9 and 11-19, would not have been *prima facie* obvious over the disclosure of Bewersdorf and reconsideration and withdrawal of this rejection is respectfully requested.

Claims 1-19 are further rejected as being obvious over Bewersdorf in view of Brichard *et al* (U.S. 4,428,914) (hereafter Brichard).

Bewersdorf is relied on substantially as above. Brichard is relied on for showing amounts of additives, such as stabilizers of magnesium sulfate and sodium silicate, in amounts which are equivalent to 100 to 200,000 ppm.

It is respectfully submitted that Brichard does not obviate the deficiencies of the disclosure of Bewersdorf.

The disclosure of Brichard is that other additives can be introduced into either the hydrogen peroxide solution or the sodium carbonate solution or both and that the additives include stabilizers of sodium percarbonate or their precursors such as magnesium sulfate and sodium silicate (Col. 4, lines 19-23). Brichard further discloses that, "in some embodiments of

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the present invention, the aqueous hydrogen peroxide solution contains magnesium sulfate and the aqueous sodium carbonate solution contains sodium silicate. The stabilizers for sodium carbonate often comprise from 0.1 to 20 g of stabilizer per kg of sodium percarbonate product, calculated as $\text{Na}_2\text{CO}_3/2\text{H}_2\text{O}_2$, but their use is not essential." (Col. 4, lines 24-31)

In this regard, it is noted that in example 1, column 9, lines 28-29, it is mentioned that a solution containing 1.2% by weight of sodium silicate (36° Baumé) with 30% sodium carbonate is used. From this disclosure, one of ordinary skill in the art would have no way to determine the composition of the sodium silicate since the density of the solution depends on both the composition and the concentration. Thus, Brichard's description of 36° Baumé density does not describe the composition of the sodium silicate.

Therefore, Brichard does not disclose, or provide motivation for selecting, a method using, or a granular product comprising, water glass having an $\text{SiO}_2/\text{Na}_2\text{O}$ module of from 1 to 3 in an amount corresponding to 0.1 wt.% to 1 wt.% SiO_2 , based on sodium percarbonate.

Accordingly, even if the practitioner of ordinary skill were to apply the disclosure of Brichard and use the non-essential sodium silicate as a stabilizer in the process and product of Bewersdorf, the resulting method/product would not have rendered obvious the method/product of the presently claimed subject matter.

Therefore, reconsideration and withdrawal of the rejection of claims 1-19, as applied to the currently pending claims, is respectfully requested.

Claims 6 and 14-15 are separately rejected over Bewersdorf in view of Bewersdorf *et al* US 5,714,201 (hereafter '201).

Applicants respectfully disagree and submit that this rejection should also be withdrawn.

The "stability" which is the subject of the '201 patent is the stability to active oxygen. Stability to oxygen may be determined by storing a mixture of sodium percarbonate and detergent powder in a humid atmosphere and detecting the decrease in active oxygen content (see the test procedure b) bridging columns 4 and 5 of the '201 patent). The stability determined by this test is a measure of the stability towards moisture contained in the detergent powder surrounding the sodium percarbonate particles.

TAM-value which is a measure of stability for the sodium percarbonate granules according to the present invention is distinctly different than oxygen stability. The stability

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determined by the TAM-value is the inherent stability of sodium percarbonate determined by the energy released during storage of dry sodium percarbonate, as such. Differences in this inherent stability are caused by the decomposing action of impurities contained in the sodium percarbonate particles.

The causes of instabilities towards active oxygen and the inherent instability due to the decomposing action of impurities within sodium percarbonate particles are unrelated. Further, the practitioner in this art would recognize that coating a sodium percarbonate particle will have little, if any, influence on the intrinsic stability determined by the TAM-value (*e.g.*, because coating the particles will not change the amount and the action of impurities contained in the sodium bicarbonate particles). By contrast, however, coating the sodium percarbonate particles with a moisture impermeable coating layer may have a significant impact on the active oxygen stability as shown, for example, in Table 2 of the '201 patent.

Accordingly, recognizing that a different problem is addressed in the '201 patent in comparison with the instant invention, it is apparent that the disclosure for effecting the active oxygen stability of sodium percarbonate would not provide any information to the practitioner for increasing the intrinsic stability of sodium percarbonate. Therefore there would be no motivation to combine the disclosures of the Bewersdorf '896 and '201 patents with respect to the amounts or module of any water glass added to the sodium percarbonate particles.

In fact, looking at the data in Table 2 (col. 6) of the '201 patent, the oxygen stability of an uncoated particle incorporating sodium silicate with a modulus of 3.2 is actually higher than the oxygen stability of the same uncoated particles incorporating sodium silicate with a modulus of 1.8. Therefore, in view of the observation that the sodium percarbonate of the Bewersdorf ('896) patent does not include a coating as per the '201 patent, the practitioner combining the two disclosures may, in fact, be inclined to use the higher modulus water glass product. Thus, even if there were sufficient motivation for a skilled practitioner to combine the disclosures of the '896 and '201 patents, the combination of these disclosures would teach away from the present invention.

In any case, the practitioner, aware of the disclosure of the '201 patent, would not find this disclosure relevant to improving the intrinsic stability of the sodium percarbonate according to Bewersdorf '896.

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Therefore, it is respectfully submitted that the subject matter of claim 6 (now incorporated into claim 1) and the subject matters of claims 14 and 15, would not have been *prima facie* obvious, over the combined disclosures of the Bewersdorf patents '896 and '201. Therefore, withdrawal of this ground for rejection is respectfully requested.

In view of the foregoing, the claims are now believed to be in form for allowance, and such action is hereby solicited.

If any point remains in issue that the examiner feels may be best resolved through a personal or telephone interview, the examiner is strongly urged to contact the undersigned at the telephone number indicated below.

Respectfully submitted,

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